

**COOK COUNTY  
MULTI-JURISDICTIONAL  
HAZARD MITIGATION PLAN  
VOLUME 2 - Municipal Annexes**

**Chicago Ridge Annex**

**FINAL**

July 2019

Prepared for:



Cook County  
Department of Homeland Security and Emergency Management  
69 W. Washington St., Suite 2600  
Chicago, Illinois 60602

Toni Preckwinkle  
President  
Cook County Board of Commissioners

William Barnes  
Executive Director  
Cook County Department of Homeland  
Security & Emergency Management

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## Hazard Mitigation Point of Contact

| Primary Point of Contact   | Alternate Point of Contact  |
|--|---|
| Bryan Pudinoff; EMA Commander<br>10425 S. Ridgeland<br>Chicago Ridge, Illinois 60415<br>Telephone: 708-514-8705<br>Email Address: <a href="mailto:commander@cr-emergency.org">commander@cr-emergency.org</a> | Kevin Schoenhofen; EMA Captain<br>10425 S. Ridgeland<br>Chicago Ridge, Illinois 60145<br>Telephone: 708-473-9780<br>Email Address: <a href="mailto:kschoenhofen@cr-emergency.org">kschoenhofen@cr-emergency.org</a> |

## Jurisdiction Profile

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation:** October 17, 1914
- **Current Population:** 14,050 as of 2018 US Census estimates.
- **Population Growth:** The population growth rate has remained flat over the last decade and is not expected to increase. There were small increases of 1 to 3 percent during 1990-2010 and since 2010, there has been a decrease of 0.48 percent.
- **Location and Description:** The Village of Chicago Ridge is located in Cook County, 18 miles south west of the Chicago Loop. Chicago Ridge's irregular shape is bounded by Oak Lawn on the north and east, Bridgeview and Palos Hills on the west, and Worth on the south. The village has a total area of 2.25 square miles.
- **Brief History:** Chicago Ridge takes its name from ridges left behind when trainloads of dirt were brought out by the Wabash Railroad during construction of the Columbian Exposition of 1893. In 1898, the Paul E. Berger Company, manufacturers of cash registers and slot machines, located adjacent to the railroad. The Berger Company built housing for its employees, and a settlement emerged around the factory, with a tavern, rooming house, and grocery store. The first post office opened in 1900 in the Berger factory, and in 1902 the Wabash Railroad established a train station. Chicago Ridge grew from 176 in 1920 to 888 in 1950. With the great demand for housing and the expansion of road networks to include expressways, Chicago Ridge was poised for growth. Along with a strong new industrial and commercial base, the population increased dramatically, to 5,748 in 1960 and 14,127 in 2000.
- **Climate:** The climate of the Village of Chicago Ridge is classified as humid continental, with all four seasons distinctly represented: wet springs; hot and humid summers; pleasant autumns; and cold winters. Annual precipitation is average, and reaches its lowest points in the months of January and February, and peaks in the months of May and June. Winter proves quite variable. Seasonal snowfall in the city has ranged from 9 – 90 inches. The daily average temperature in January at Midway Airport is 24.8 °F (-4.0 °C), and temperatures often stay below freezing for several consecutive days or even weeks in January and February. Temperatures drop to or below 0 °F (-18 °C) on 5.5 nights annually at Midway and 8.2 nights at O'Hare. Spring in the Chicago area is perhaps the city's wettest and unpredictable season. Winter like conditions can persist well into April and even occasionally into May. Thunderstorms are especially prevalent in the spring time as the city's lakeside location makes it a center of conflicts between large volumes of warmer and colder air, triggering many kinds of severe weather. Temperatures vary tremendously in the springtime; March is the month with the greatest span between the record highs and lows. On a typical summer day, humidity is usually moderately high and temperatures ordinarily reach anywhere between 78 and 92 °F (26 and 33 °C). The extreme heat that the Chicago area is capable of experiencing during the height of the summer season can persist into the autumn season. Temperatures have reached 100 degrees high and subzero lows below -18 °C. Fall can bring heavy thunderstorms, many of which are capable of producing flooding. The average first accumulating snow occurs around Nov 19.

- **Governing Body Format:** Chicago Ridge is in Illinois' 3rd congressional district. The Village of Chicago Ridge is governed by a President and Board of Trustees. This body of government will oversee the adoption and implementation of this plan. The Village President is the chief executive officer, and the Board of Trustees is the legislative body. The Village Clerk is the keeper of the records. The Village President, Board of Trustees and Clerk are all elected to four-year terms. Local elections are held every two years in the spring. The Village operates with 8 departments including: Building Department, Community Development, Emergency Management Agency, Fire Department, Planning & Zoning, Police Department, Public Works Department, and the Village Clerk's Office.
- **Development Trends:** Anticipated development levels for Chicago Ridge are low consisting primarily of residential development. Over the years, recreational and cultural amenities including parks and a library, as well as business and industry were added to the picture. The Chicago Ridge Mall (formerly Westfield Chicago Ridge) at 95th and Ridgeland has over 130 stores and a six-screen theater. The Chicago Ridge Commons at 99th and Ridgeland has over 55 strip stores. Commercial development is currently centered in the industrial sector, the Park at Chicago Ridge.

## Capability Assessment

The assessment of the jurisdiction’s legal and regulatory capabilities is presented in the *Legal and Regulatory Capability Table* below. The assessment of the jurisdiction’s fiscal capabilities is presented in the *Fiscal Capability Table* below. The assessment of the jurisdiction’s administrative and technical capabilities is presented in the *Administrative and Technical Capability Table* below. Information on the community’s National Flood Insurance Program (NFIP) compliance is presented in the *National Flood Insurance Program Compliance Table* below. Classifications under various community mitigation programs are presented in the *Community Classifications Table* below.

| <b>TABLE: LEGAL AND REGULATORY CAPABILITY</b> |                        |                                      |                                       |                       |  |
|---|------------------------|--------------------------------------|---------------------------------------|-----------------------|--|
|   | <b>Local Authority</b> | <b>State or Federal Prohibitions</b> | <b>Other Jurisdictional Authority</b> | <b>State Mandated</b> | <b>Comments</b>  |
| <b>Codes, Ordinances &amp; Requirements</b>   |                        |                                      |                                       |                       |  |
| Building Code                                 | Yes                    | No                                   | No                                    | Yes                   | In accordance with Public Act 096-0704, Illinois has adopted the IBC as its state Building Code. ADOPTED 11-3-03         |
| Zonings                                       | Yes                    | No                                   | No                                    | Yes                   | (65 ILCS 5/) Illinois Municipal Code. ADOPTED 11-3-03  |
| Subdivisions                                  | Yes                    | No                                   | No                                    | No                    | CHMC, Chapter 44, 12/20/2011   |
| Stormwater Management                         | Yes                    | Yes                                  | No                                    | Yes                   | State regulates industrial activity from Construction sites 1 acre or larger under section 402 CWA. 91-11-17, 12/20/2011 |
| Post Disaster Recovery                        | Yes                    | No                                   | No                                    | No                    |  |
| Real Estate Disclosure                        | No                     | Yes                                  | Yes                                   | Yes                   | (765 ILCS 77/) Residential Real Property Disclosure Act.   |

|   |     |     |      |     |   |
|---|-----|-----|------|-----|---|
| Growth Management   | No  | No  | No   | No  |   |
| Site Plan Review  | No  | No  | No   | No  |   |
| Public Health and Safety  | Yes | Yes | Yes  | Yes | Cook County Board of Health.<br>ADOPTED 1978  |
| Environmental Protection  | No  | No  | No   | No  |   |
| <b>Planning Documents</b>   |     |     |      |     |   |
| General or Comprehensive Plan   | Yes | No  | No   | No  | Village of Chicago Ridge Comprehensive Plan – May 1, 2012   |
| <i>Is the plan equipped to provide linkage to this mitigation plan?</i> |     |     |      |     | Yes-Land use<br>Yes-Environmental Features<br>Yes-Redevelopment   |
| Floodplain or Basin Plan  | No  | No  | No   | No  |   |
| Stormwater Plan   | Yes | No  | MWRD | No  | Regional stormwater impacts are managed by MWRD. The Village lies within the Cal-Sag River watershed planning area of MWRD's comprehensive Stormwater Master Planning Program |
| Capital Improvement Plan  | Yes | No  | No   | No  | Chicago Ridge CIP   |
| <i>What types of capital facilities does the plan address?</i>          |     |     |      |     | Buildings and Streets   |
| <i>How often is the plan revised/updated?</i>                           |     |     |      |     | Annually  |
| Habitat Conservation Plan   | No  | No  | No   | No  |   |

|  |     |    |     |     |                                       |
|--|-----|----|-----|-----|---------------------------------------|
| Economic Development Plan                            | Yes | No | Yes | Yes | Chicago Ridge Comprehensive Plan 2012 |
| Shoreline Management Plan                            | No  | No | No  | No  |                                       |
| <b>Response/Recovery Planning</b>                    |     |    |     |     |                                       |
| Comprehensive Emergency Management Plan              | No  | No | Yes | Yes | Cook County DHSEM                     |
| Threat and Hazard Identification and Risk Assessment | No  | No | Yes | No  | Cook County DHSEM Preparing THIRA     |
| Terrorism Plan                                       | No  | No | Yes | Yes | Cook County DHSEM                     |
| Post-Disaster Recovery Plan                          | No  | No | No  | No  | Cook County DHSEM                     |
| Continuity of Operations Plan                        | No  | No | Yes | No  | Cook County DHSEM                     |
| Public Health Plans                                  | No  | No | Yes | No  | Cook County DPM                       |

**TABLE: FISCAL CAPABILITY**

| <b>Financial Resources</b>                           | <b>Accessible or Eligible to Use?</b> |
|--|---------------------------------------|
| Community Development Block Grants                   | Yes                                   |
| Capital Improvements Project Funding                 | Yes                                   |
| Authority to Levy Taxes for Specific Purposes        | Yes                                   |
| User Fees for Water, Sewer, Gas or Electric Service  | Yes                                   |
| Incur Debt through General Obligation Bonds          | Yes                                   |
| Incur Debt through Special Tax Bonds                 | Yes                                   |
| Incur Debt through Private Activity Bonds            | Yes                                   |
| Withhold Public Expenditures in Hazard-Prone Areas   | Yes                                   |
| State Sponsored Grant Programs                       | Yes                                   |
| Development Impact Fees for Homebuyers or Developers | Yes                                   |



| <b>TABLE: ADMINISTRATIVE AND TECHNICAL CAPABILITY</b>                                   |                   |  |
|---|-------------------|--|
| <b>Staff/Personnel Resources</b>  | <b>Available?</b> | <b>Department/Agency/Position</b>                |
| Planners or engineers with knowledge of land development and land management practices  | Yes               | Burke Engineering                                |
| Engineers or professionals trained in building or infrastructure construction practices | Yes               | Building Department/Burke Engineering            |
| Planners or engineers with an understanding of natural hazards                          | Yes               | Burke Engineering                                |
| Staff with training in benefit/cost analysis  | Yes               | Chicago Ridge Village Hall/<br>Burke Engineering |
| Surveyors   | Yes               | Public Works/Burke Engineering                   |
| Personnel skilled or trained in GIS applications  | Yes               | Public Works/Burke Engineering                   |
| Scientist familiar with natural hazards in local area                                   | Yes               | Burke Engineering                                |
| Emergency manager   | Yes               | Chicago Ridge EMA                                |
| Grant writers   | Yes               | Chicago Ridge<br>Police/Fire/EMA                 |

| <b>TABLE: NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE</b>  |                                |
|--|--------------------------------|
| What department is responsible for floodplain management in your jurisdiction?   | Public Works/Burke Engineering |
| Who is your jurisdiction’s floodplain administrator? (department/position)   | Public Works/Burke Engineering |
| Are any certified floodplain managers on staff in your jurisdiction?   | Yes                            |
| What is the date of adoption of your flood damage prevention ordinance?  | 1991                           |
| When was the most recent Community Assistance Visit or Community Assistance Contact?   | 09-11-07                       |
| Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? If so, please state what they are. | No                             |
| Do your flood hazard maps adequately address the flood risk within your jurisdiction? (If no, please state why)                      | Yes                            |

|   |             |
|---|-------------|
| Does your floodplain management staff need any assistance or training to support its floodplain management program? If so, what type of assistance/training is needed?  | No          |
| Does your jurisdiction participate in the Community Rating System (CRS)? If so, is your jurisdiction seeking to improve its CRS Classification? If not, is your jurisdiction interested in joining the CRS program? | No; Unknown |

| <b>TABLE: COMMUNITY CLASSIFICATIONS</b>      |                       |                       |                        |
|--|-----------------------|-----------------------|------------------------|
|  | <b>Participating?</b> | <b>Classification</b> | <b>Date Classified</b> |
| Community Rating System                      | No                    | N/A                   | N/A                    |
| Building Code Effectiveness Grading Schedule | Unknown               | --                    | --                     |
| Public Protection/ISO                        | Unknown               | --                    | --                     |
| StormReady                                   | Yes                   | Gold<br>(Countywide)  | 2018                   |
| Tree City USA                                | No                    | N/A                   | N/A                    |

## Jurisdiction-Specific Natural Hazard Event

The information provided below was solicited from the jurisdiction and supported by NOAA and other relevant data sources.

The *Natural Hazard Events Table* lists all past occurrences of natural hazards within the jurisdiction. Repetitive flood loss records are as follows:

- Number of FEMA-Identified Repetitive Loss Properties: 0
- Number of FEMA-Identified Severe Repetitive Loss Properties: 0
- Number of Repetitive Flood Loss/Severe Repetitive Loss Properties That Have Been Mitigated: N/A

| <b>Type of Event</b>                                     | <b>FEMA Disaster Number (if applicable)</b> | <b>Date</b> | <b>Preliminary Damage Assessment</b>  |
|--|---|-------------|---|
| Illinois Severe Storms, Straight-Line Winds and Flooding | -   | 6/30/2019   | Multiple trees and light poles down. Localized flooding and wide-spread power outages occurred. |
| Severe Weather   | -   | 6/30/2014   | -   |
| Illinois Severe Storms, Straight-Line Winds and Flooding | -   | 2013        | -   |
| Illinois Severe Winter Storm and Snowstorm               | -   | 2011        | -   |
| Illinois Severe Storms and Flooding                      | -   | 2010        | -   |
| Illinois Severe Storms and Flooding                      | -   | 2008        | -   |
| Illinois Severe Storms and Flooding                      | -   | 2007        | -   |
| Illinois Flooding  | -   | 1997        | -   |
| Illinois Flooding  | -   | 1996        | -   |
| Illinois Flooding, Severe Storms                         | -   | 1993        | -   |

|   |        |        |              |
|---|--------|--------|--------------|
| Illinois Severe Storms, Flooding            | -      | 1987   | -            |
| Illinois Severe Storms, Flooding            | -      | 1986   | -            |
| Illinois Severe Storms, Flooding, Tornadoes | -      | 1981   | -            |
| Illinois Severe Storms, Flooding, Tornadoes | -      | 1976   | -            |
| Illinois Severe Storms, Flooding            | -      | 1973   | -            |
| Illinois Severe Storms, Flooding            | -      | 1972   | -            |
| Illinois Tornadoes                          | DR-227 | 4/1967 | Major damage |

#### **Jurisdiction-Specific Hazards and Impacts**

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2019 Cook County Multi-Jurisdictional Hazard Mitigation Plan Update. This section only addresses the hazards and their associated impacts that are **relevant** and **unique** to the municipality

**Severe Weather/ Severe Winter Weather:** Chicago Ridge continues to be impacted by severe storms, severe winter storms, and straight-line winds. As a result, multiple activations of the EOC, power outages, deployments to address storm sewer back-up/cleaning, as well as, road closures have occurred.

**Flooding:** Flooding as a result of severe storms has occurred numerous times within Chicago Ridge. Recently, flooding between 95th and Harlem required one driver to be rescued.

**Earthquake:** Although earthquakes or their effects are not commonly felt in Chicago Ridge, earthquakes have happened on several occasions in Illinois over the last few decades. Chicago Ridge continues to prepare and mitigate against this hazards.

## Hazard Risk Ranking

The *Hazard Risk Ranking Table* below presents the ranking of the hazards of concern. Hazard area extent and location maps are included at the end of this chapter. These maps are based on the best available data at the time of the preparation of this plan, and are considered to be adequate for planning purposes.

| <b>TABLE: HAZARD RISK RANKING</b> |                       |   |
|-----------------------------------|-----------------------|---|
| <b>Rank</b>                       | <b>Hazard Type</b>    | <b>Risk Rating Score<br/>(Probability x Impact)</b> |
| 1                                 | Severe Weather        | 54  |
| 2                                 | Severe Winter Weather | 54  |
| 3                                 | Tornado               | 33  |
| 4                                 | Earthquake            | 32  |
| 5                                 | Flood                 | 18  |
| 6                                 | Drought               | 2   |
| 7                                 | Dam Failure           | 2   |

## Mitigation Strategies and Actions

The heart of the mitigation plan is the mitigation strategy, which serves as the long-term blueprint for reducing the potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process. In this section, mitigation actions/projects were updated/amended, identified, evaluated, and prioritized. This section is organized as follows:

- New Mitigation Actions - New actions identified during this 2019 update process
- Ongoing Mitigation Actions - Ongoing actions with no definitive end or that are still in progress. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.
- Completed Mitigation Actions - An archive of all identified and completed projects, including completed actions since 2014.

The *Hazard Mitigation Action Plan Matrix Table* below lists the actions that make up the jurisdiction’s hazard mitigation plan. The *Mitigation Strategy Priority Schedule Table* identifies the priority for each action.

| TABLE: HAZARD MITIGATION ACTION PLAN MATRIX   |   |                   |               |                |                       |  |
|---|---|-------------------|---------------|----------------|-----------------------|--|
| Status  | Hazards Mitigated                                 | Objectives Met    | Lead Agencies | Estimated Cost | Sources of Funding    | Timeline/Projected Completion Date (a) |
| <b>Action C5.1</b> —Construct water reservoir maintenance improvement projects.   |   |                   |               |                |                       |  |
| Ongoing   | Earthquake, Flood, Severe Weather/ Winter Weather | 1, 2, 3, 4, 9, 12 | Village       |                | Village               | Short-term                             |
| <b>Action C5.2</b> —Construct water distribution and sewer projects to strengthen system and ensure reliable public water and sewer services. |   |                   |               |                |                       |  |
| Ongoing   | Earthquake  | 1, 2, 3           | Village       | High           | Water and Sewer bonds | Long-term                              |
| <b>Action C5.3</b> —Maintain compliance and good standing under the National Flood Insurance Program.   |   |                   |               |                |                       |  |
| Completed   | Flood   | 8, 11, 12, 13     | Village       | Low            | Village               | Completed                              |
| <b>Action C5.4</b> —Participate in the Community Rating System (CRS).   |   |                   |               |                |                       |  |

|  |                            |                       |         |        |                   |            |
|--|----------------------------|-----------------------|---------|--------|-------------------|------------|
| Ongoing  | Flood                      | 8, 11, 12, 13         | Village | Low    | Village           | Short-term |
| <b>Action C5.5</b> —Educating citizens regarding the dangers of extreme heat and cold and the steps they can take to protect themselves when extreme temperatures occur. |                            |                       |         |        |                   |            |
| Ongoing  | Extreme Heat, Extreme Cold | 6, 8, 12, 13          | Village | Low    | HMGP/PDM, Village | Short-term |
| <b>Action C5.6</b> —Maintain the viability of all critical facilities and retrofit if necessary.   |                            |                       |         |        |                   |            |
| Ongoing  | All                        | 1, 2, 7, 9, 12        | Village | High   | HMGP/PDM, Village | Short-term |
| <b>Action C5.7</b> —Regular inspections of dams, upgrade/retrofit as necessary.  |                            |                       |         |        |                   |            |
| Ongoing  | Dam Failure, Flood         | 1, 2, 9, 12           | Village | Medium | HMGP/PDM, Village | Short-term |
| <b>Action C5.8</b> —Collect information and participate in programs which address emergency preparedness.  |                            |                       |         |        |                   |            |
| Ongoing  | All                        | 6, 8                  | Village | Low    | Village           | Long-term  |
| <b>Action C5.9</b> —Plan for and maintain adequate road and debris clearing capabilities.  |                            |                       |         |        |                   |            |
| Ongoing  | Severe Winter Weather      | 1, 2, 12              | Village | Medium | Village           | Short-term |
| <b>Action C5.10</b> —Mitigate increased runoff from new development.   |                            |                       |         |        |                   |            |
| Ongoing  | Flood                      | 3, 4, 9, 10, 12       | Village | Medium | Developer         | Short-term |
| <b>Action C5.11</b> —Promote waterway cleanup activities.  |                            |                       |         |        |                   |            |
| Ongoing  | Flood                      | 6, 8, 13              | Village | Low    | Village           | Short-term |
| <b>Action C5.12</b> —Modify, relocate or bury infrastructure to reduce disruption or loss of service during hazards or disasters.  |                            |                       |         |        |                   |            |
| Ongoing  | All                        | 1, 2, 4, 6, 8, 10, 13 | Village | High   | HMGP/PDM, Village | Long-term  |
| <b>Action C5.13</b> —Upgrade/retrofit bridges to provide floodplain clearance and meet seismic design standards.   |                            |                       |         |        |                   |            |
| Ongoing  | Flood, Earthquake          | 1, 2, 6, 8            | Village | High   | HMGP/PDM, Village | Long-term  |
| <b>Action C5.14</b> —Evaluate/upgrade the existing stormwater management system.   |                            |                       |         |        |                   |            |

|  |  |                              |                   |        |  |            |
|--|--|------------------------------|-------------------|--------|--|------------|
| Ongoing  | Dam Failure, Flood, Severe Weather, Winter Weather | 1, 2, 9, 12                  | Village           | High   | HMGP/PDM, Village                                  |            |
| <b>Action C5.15</b> —Evaluate/upgrade transportation infrastructure for appropriate emergency access and evacuation capabilities.  |  |                              |                   |        |  |            |
| Ongoing  | All  | 1, 6, 8, 11, 13              | Village           | Low    | HMGP/PDM, Village                                  |            |
| <b>Action C5.16</b> —Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structural damage. Give priority to properties with exposure to repetitive losses. |  |                              |                   |        |  |            |
| Ongoing  | All  | 7, 13                        | Village           | High   | FEMA Hazard Mitigation Grants                      |            |
| <b>Action C5.17</b> —Continue to support the countywide actions identified in this plan.   |  |                              |                   |        |  |            |
| Ongoing  | All  | All                          | Village           | Low    | General Fund                                       |            |
| <b>Action C5.18</b> —Actively participate in the plan maintenance strategy identified in this plan.  |  |                              |                   |        |  |            |
| Ongoing  | All  | 3, 4, 6                      | DHSEM Village     | Low    | General Fund                                       |            |
| <b>Action C5.19</b> —Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.  |  |                              |                   |        |  |            |
| Completed  | All  | 3, 4, 5, 6, 7, 9, 10, 11, 13 | Village           | Low    | General Fund                                       | Completed  |
| <b>Action C5.20</b> —Where feasible, implement a program to record high water marks following high-water events.   |  |                              |                   |        |  |            |
| Ongoing  | Flooding, Severe Weather                           | 3, 6, 9                      | Village           | Medium | General Fund; FEMA Grant Funds (Public Assistance) | Long-term  |
| <b>Action C5.21</b> —Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.   |  |                              |                   |        |  |            |
| Ongoing  | All  | 3, 4, 6, 10, 13              | Burke Engineering | Low    | General Fund                                       | Short term |



| <b>Action C5.22—Generator install on EOC</b>  |       |   |                             |                |             |         |
|---|-------|---|-----------------------------|----------------|-------------|---------|
| New   | All   | 5 | Emergency Management Agency | \$50,000; High | Local Funds | 2019    |
| <b>Action C5.23—Streambank Stabilization along Melvina Ditch</b>  |       |   |                             |                |             |         |
| New   | Flood | 9 | MWRD                        | \$8,800,000    | Unknown     | Unknown |
| (a) Ongoing indicates continuation of an action that is already in place. Short-term indicates implementation within five years. Long-term indicates implementation after five years. |       |   |                             |                |             |         |

| <b>TABLE: MITIGATION STRATEGY PRIORITY SCHEDULE</b> |                                 |                 |              |   |                                   |   |                     |
|---|---------------------------------|-----------------|--------------|---|-----------------------------------|---|---------------------|
| <b>Action Number</b>                                | <b>Number of Objectives Met</b> | <b>Benefits</b> | <b>Costs</b> | <b>Do Benefits Equal or Exceed Costs?</b> | <b>Is Project Grant-Eligible?</b> | <b>Can Project Be Funded Under Existing Programs/Budgets?</b> | <b>Priority (a)</b> |
| 1   | 6                               | Medium          | Medium       | Yes                                       | No                                | Yes   | Medium              |
| 2   | 3                               | High            | High         | Yes                                       | No                                | No  | Medium              |
| 3   | 4                               | Medium          | Low          | Yes                                       | No                                | Yes   | High                |
| 4   | 4                               | Medium          | Low          | Yes                                       | No                                | Yes   | Low                 |
| 5   | 4                               | Medium          | Low          | Yes                                       | Yes                               | Yes   | Medium              |
| 6   | 5                               | High            | High         | Yes                                       | Yes                               | Yes   | High                |
| 7   | 4                               | Medium          | Medium       | Yes                                       | Yes                               | No  | Medium              |
| 8   | 2                               | TBD             | Low          | Yes                                       | TBD                               | TBD   | TBD                 |
| 9   | 3                               | High            | Medium       | Yes                                       | No                                | Yes   | High                |
| 10  | 5                               | High            | Medium       | Yes                                       | No                                | Yes   | High                |
| 11  | 3                               | Low             | Low          | Yes                                       | No                                | Yes   | Low                 |
| 12  | 7                               | High            | High         | Yes                                       | Yes                               | No  | Medium              |
| 13  | 4                               | Medium          | High         | No  | Yes                               | No  | Medium              |
| 14  | 4                               | High            | High         | Yes                                       | Yes                               | No  | High                |
| 15  | 5                               | Medium          | High         | Yes                                       | Yes                               | No  | Medium              |
| 16  | 2                               | High            | High         | Yes                                       | Yes                               | No  | Medium              |
| 17  | 13                              | Medium          | Low          | Yes                                       | No                                | Yes   | High                |

|    |   |         |         |         |         |         |         |
|----|---|---------|---------|---------|---------|---------|---------|
| 18 | 3 | Medium  | Low     | Yes     | Yes     | Yes     | High    |
| 19 | 9 | Medium  | Low     | Yes     | No      | Yes     | Medium  |
| 20 | 3 | Medium  | Medium  | Yes     | Yes     | No      | Medium  |
| 21 | 5 | Medium  | Low     | Yes     | No      | Yes     | High    |
| 22 | 1 | High    | High    | Yes     | Yes     | No      | High    |
| 23 | 1 | Unknown | Unknown | Unknown | Unknown | Unknown | Unknown |

(a) See Chapter 1 for explanation of priorities.

## New Mitigation Actions

The following are new mitigation actions created during the 2019 update.

**Action C - 5.22**

|   |   |
|---|---|
| <b>Mitigation Action</b>                                    | Generator install on EOC  |
| <b>Year Initiated</b>                                       | 2019  |
| <b>Applicable Jurisdiction</b>                              | Chicago Ridge EMA   |
| <b>Lead Agency/Organization</b>                             | Emergency Management Agency   |
| <b>Supporting Agencies/Organizations</b>                    |   |
| <b>Applicable Goal</b>                                      | <ul style="list-style-type: none"> <li>Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events.</li> </ul>           |
| <b>Applicable Objective</b>                                 | <ul style="list-style-type: none"> <li>Develop, improve, and protect systems that provide early warnings, emergency response communications, and evacuation procedures.</li> </ul>    |
| <b>Potential Funding Source</b>                             | Local Funds   |
| <b>Estimated Cost</b>                                       | \$50,000  |
| <b>Benefits (loss avoided)</b>                              | Will be able to power facility when power is interrupted to monitor weather, activate sirens, and maintain EOC, cooling/warming center and continue village operations.               |
| <b>Projected Completion Date</b>                            | 2019  |
| <b>Priority and Level of Importance (Low, Medium, High)</b> | High Priority   |
| <b>Benefit Analysis (Low, Medium, High)</b>                 | High—Project will provide an immediate reduction of risk exposure for life and property.  |
| <b>Cost Analysis (Low, Medium, High)</b>                    | High—Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases). |
| <b>Actual Completion Date</b>                               |   |

| <b>Recommended Mitigation Action/Implementation Plan and Project Description</b> |  |
|--|--|
| <b>Action/Implementation Plan and Project Description:</b>                       | Install natural gas powered generator to power EOC during power interruptions. |

| <b>Mitigation Action and Project Maintenance</b> |               |                 |
|--|---------------|-----------------|
| <b>Year</b>                                      | <b>Status</b> | <b>Comments</b> |
| 2019   | New           |                 |
| 2020   |               |                 |
| 2021   |               |                 |
| 2022   |               |                 |
| 2023   |               |                 |

| Mitigated Hazards |  |
|-------------------|--|
| X                 | All Hazards                                    |
|                   | Dam/Levee Failure                              |
|                   | Drought  |
|                   | Earthquake                                     |
|                   | Flood  |
|                   | Extreme Heat                                   |
|                   | Lightning                                      |
|                   | Hail   |
|                   | Fog  |
|                   | High Wind                                      |
|                   | Snow   |
|                   | Blizzard                                       |
|                   | Extreme Cold                                   |
|                   | Ice Storms                                     |
|                   | Tornado  |
|                   | Epidemic or pandemic                           |
|                   | Nuclear Power Plant Incident                   |
|                   | Widespread Power Outage                        |
|                   | Coastal Erosion                                |
|                   | Secondary Impacts from Mass Influx of Evacuees |
|                   | Hazardous Materials Incident                   |

**Action C - 5.23**

|   |  |
|---|--|
| <b>Mitigation Action</b>                                    | Streambank Stabilization along Melvina Ditch   |
| <b>Year Initiated</b>                                       | 2019   |
| <b>Applicable Jurisdiction</b>                              | Chicago Ridge  |
| <b>Lead Agency/Organization</b>                             | MWRD   |
| <b>Supporting Agencies/Organizations</b>                    | Chicago Ridge  |
| <b>Applicable Goal</b>                                      | <ul style="list-style-type: none"> <li>Protect the lives, health, safety, and property of the citizens of Cook County from the impacts of natural hazards.</li> <li>Protect public services and critical facilities, including infrastructure, from loss of use during natural hazard events and potential damage from such activities.</li> </ul> |
| <b>Applicable Objective</b>                                 | <ul style="list-style-type: none"> <li>Provide or improve flood protection on a watershed basis with flood control structures and drainage maintenance plans.</li> </ul>   |
| <b>Potential Funding Source</b>                             | Unknown  |
| <b>Estimated Cost</b>                                       | \$8,800,000  |
| <b>Benefits (loss avoided)</b>                              | Unknown  |
| <b>Projected Completion Date</b>                            | Unknown  |
| <b>Priority and Level of Importance (Low, Medium, High)</b> | Unknown  |
| <b>Benefit Analysis (Low, Medium, High)</b>                 | Unknown  |
| <b>Cost Analysis (Low, Medium, High)</b>                    | Unknown  |
| <b>Actual Completion Date</b>                               | Unknown  |

| Recommended Mitigation Action/Implementation Plan and Project Description |   |
|---|---|
| <b>Action/Implementation Plan and Project Description:</b>                | ID: MEDT-1<br>Contract: 13-248-3F<br>Watershed: Cal-Sag Channel<br>Location: Chicago Ridge, Oak Lawn, IL<br>Description: Stabilization along Melvina Ditch, from 95th Street to 99th Street. Approximately 150 linear feet of the ditch at the north end of the project will be stabilized with twin box culverts. The remaining 2,500 linear feet of the ditch will be stabilized with a precast concrete modular block retaining wall system. |

| Mitigation Action and Project Maintenance |        |   |  |  |  |
|---|--------|---|--|--|--|
| Year                                      | Status | Comments  |  |  |  |
| 2019                                      | New    | Finalizing easements and permits. Preparing for bidding in Fall 2019. |  |  |  |
| 2020                                      |        |   |  |  |  |
| 2021                                      |        |   |  |  |  |

|      |  |  |
|------|--|--|
| 2022 |  |  |
| 2023 |  |  |

| Mitigated Hazards |  |
|-------------------|--|
|                   | All Hazards                                    |
|                   | Dam/Levee Failure                              |
|                   | Drought  |
|                   | Earthquake                                     |
| X                 | Flood  |
|                   | Extreme Heat                                   |
|                   | Lightning                                      |
|                   | Hail   |
|                   | Fog  |
|                   | High Wind                                      |
|                   | Snow   |
|                   | Blizzard                                       |
|                   | Extreme Cold                                   |
|                   | Ice Storms                                     |
|                   | Tornado  |
|                   | Epidemic or pandemic                           |
|                   | Nuclear Power Plant Incident                   |
|                   | Widespread Power Outage                        |
|                   | Coastal Erosion                                |
|                   | Secondary Impacts from Mass Influx of Evacuees |
|                   | Hazardous Materials Incident                   |

### Ongoing Mitigation Actions

The following are ongoing actions with no definitive end or that are still in progress. During the 2019 update, these "ongoing" mitigation actions and projects were modified and/or amended, as needed.



**Action C - 5.1**

| <b>TABLE: ACTION PLAN MATRIX</b>  |   |                           |
|---|---|---------------------------|
| Action Number<br>Action Taken<br>Y/N  | Action Item Description                                     | Status<br>(X, O, C, R, N) |
| #C - 5.1  | Construct water reservoir maintenance improvement projects. |                           |
| Status Description:<br>Yes  | Clean/Repair Water Tower July 2018.                         | O                         |
| <p align="center"><b>Completion status legend:</b><br/> <b>N</b> = New    <b>O</b> = Action Ongoing toward Completion<br/> <b>C</b> = Project Completed    <b>R</b> = Want Removed from Annex    <b>X</b> = No Action Taken</p> |   |                           |

**Action C - 5.2**

| <b>TABLE: ACTION PLAN MATRIX</b>  |   |                           |
|---|---|---------------------------|
| Action Number<br>Action Taken<br>Y/N  | Action Item Description   | Status<br>(X, O, C, R, N) |
| #C - 5.2  | Construct water distribution and sewer projects to strengthen system and ensure reliable public water and sewer services. |                           |
| Status Description:<br>Yes  | Ongoing evaluations/projects  | O                         |
| <p align="center"><b>Completion status legend:</b><br/> <b>N</b> = New    <b>O</b> = Action Ongoing toward Completion<br/> <b>C</b> = Project Completed    <b>R</b> = Want Removed from Annex    <b>X</b> = No Action Taken</p> |   |                           |

**Action C - 5.4**

| <b>TABLE: ACTION PLAN MATRIX</b>  |   |                           |
|---|---|---------------------------|
| Action Number<br>Action Taken<br>Y/N  | Action Item Description                           | Status<br>(X, O, C, R, N) |
| #C - 5.4  | Participate in the Community Rating System (CRS). |                           |
| Status Description:<br>No   |   | X                         |
| <p align="center"><b>Completion status legend:</b><br/> <b>N</b> = New    <b>O</b> = Action Ongoing toward Completion<br/> <b>C</b> = Project Completed    <b>R</b> = Want Removed from Annex    <b>X</b> = No Action Taken</p> |   |                           |

**Action C - 5.5**

| <b>TABLE: ACTION PLAN MATRIX</b>  |  |                           |
|---|--|---------------------------|
| Action Number<br>Action Taken<br>Y/N  | Action Item Description  | Status<br>(X, O, C, R, N) |
| #C - 5.5  | Educating citizens regarding the dangers of extreme heat and cold and the steps they can take to protect themselves when extreme temperatures occur. |                           |
| Status Description:<br>Yes  | The Chicago Ridge EMA has many classes per year about weather safety.  | O                         |
| <p align="center"><b>Completion status legend:</b><br/> <b>N</b> = New    <b>O</b> = Action Ongoing toward Completion<br/> <b>C</b> = Project Completed    <b>R</b> = Want Removed from Annex    <b>X</b> = No Action Taken</p> |  |                           |

**Action C - 5.6**

| <b>TABLE: ACTION PLAN MATRIX</b>  |  |                           |
|---|--|---------------------------|
| Action Number<br>Action Taken<br>Y/N  | Action Item Description  | Status<br>(X, O, C, R, N) |
| #C - 5.6  | Maintain viability of all critical facilities and retrofit if necessary. |                           |
| Status Description:<br>Yes  | Ongoing  | O                         |
| <p><b>Completion status legend:</b><br/>                     N = New    O = Action Ongoing toward Completion<br/>                     C = Project Completed    R = Want Removed from Annex    X = No Action Taken</p> |  |                           |

**Action C - 5.7**

| <b>TABLE: ACTION PLAN MATRIX</b>  |  |                           |
|---|--|---------------------------|
| Action Number<br>Action Taken<br>Y/N  | Action Item Description                                    | Status<br>(X, O, C, R, N) |
| #C - 5.7  | Regular inspections of dams, upgrade/retrofit as necessary |                           |
| Status Description:<br>Yes  |  | O                         |
| <p><b>Completion status legend:</b><br/>                     N = New    O = Action Ongoing toward Completion<br/>                     C = Project Completed    R = Want Removed from Annex    X = No Action Taken</p> |  |                           |

**Action C - 5.8**

| <b>TABLE: ACTION PLAN MATRIX</b>   |   |                           |
|--|---|---------------------------|
| Action Number<br>Action Taken Y/N  | Action Item Description   | Status<br>(X, O, C, R, N) |
| #C - 5.8   | Collect information and participate in programs which address emergency preparedness.   |                           |
| Status Description:<br>Yes   | The Chicago Ridge EMA goes to all schools in the village and talks about severe weather. The EMA actively participates in the StormReady program. | O                         |
| <p align="center"><b>Completion status legend:</b><br/>                     N = New    O = Action Ongoing toward Completion<br/>                     C = Project Completed    R = Want Removed from Annex    X = No Action Taken</p> |   |                           |

**Action C - 5.9**

| <b>TABLE: ACTION PLAN MATRIX</b>   |   |                           |
|--|---|---------------------------|
| Action Number<br>Action Taken Y/N  | Action Item Description   | Status<br>(X, O, C, R, N) |
| #C - 5.9   | Plan for and maintain adequate road and debris clearing capabilities. |                           |
| Status Description:<br>Yes   | Plan in effect for street cleaning                                    | O                         |
| <p align="center"><b>Completion status legend:</b><br/>                     N = New    O = Action Ongoing toward Completion<br/>                     C = Project Completed    R = Want Removed from Annex    X = No Action Taken</p> |   |                           |

**Action C - 5.10**

| <b>TABLE: ACTION PLAN MATRIX</b>   |  |                           |
|--|--|---------------------------|
| Action Number<br>Action Taken<br>Y/N   | Action Item Description                        | Status<br>(X, O, C, R, N) |
| #C - 5.10  | Mitigate increased runoff from new development |                           |
| Status Description:<br>No  |  | X                         |
| <p><b>Completion status legend:</b><br/> <b>N</b> = New    <b>O</b> = Action Ongoing toward Completion<br/> <b>C</b> = Project Completed    <b>R</b> = Want Removed from Annex    <b>X</b> = No Action Taken</p> |  |                           |

**Action C - 5.11**

| <b>TABLE: ACTION PLAN MATRIX</b>   |                                      |                           |
|--|--------------------------------------|---------------------------|
| Action Number<br>Action Taken<br>Y/N   | Action Item Description              | Status<br>(X, O, C, R, N) |
| #C - 5.11  | Promote waterway cleanup activities. |                           |
| Status Description:<br>No  |                                      | X                         |
| <p><b>Completion status legend:</b><br/> <b>N</b> = New    <b>O</b> = Action Ongoing toward Completion<br/> <b>C</b> = Project Completed    <b>R</b> = Want Removed from Annex    <b>X</b> = No Action Taken</p> |                                      |                           |

**Action C - 5.12**

| <b>TABLE: ACTION PLAN MATRIX</b>  |   |                              |
|---|---|------------------------------|
| Action Number<br>Action Taken<br>Y/N  | Action Item Description   | Status<br>(X, O, C, R,<br>N) |
| #C - 5.12   | Modify, relocate or bury infrastructure to reduce disruption or loss of service during hazards or disasters |                              |
| Status Description:<br>No   |   | X                            |
| <p align="center"><b>Completion status legend:</b><br/> <b>N</b> = New    <b>O</b> = Action Ongoing toward Completion<br/> <b>C</b> = Project Completed    <b>R</b> = Want Removed from Annex    <b>X</b> = No Action Taken</p> |   |                              |

**Action C - 5.13**

| <b>TABLE: ACTION PLAN MATRIX</b>  |   |                           |
|---|---|---------------------------|
| Action Number<br>Action Taken<br>Y/N  | Action Item Description   | Status<br>(X, O, C, R, N) |
| #C - 5.13   | Upgrade/retrofit bridges to provide floodplain clearance and meet seismic design standards. |                           |
| Status Description:   |   | O                         |
| <p align="center"><b>Completion status legend:</b><br/> <b>N</b> = New    <b>O</b> = Action Ongoing toward Completion<br/> <b>C</b> = Project Completed    <b>R</b> = Want Removed from Annex    <b>X</b> = No Action Taken</p> |   |                           |

**Action C - 5.14**

| <b>TABLE: ACTION PLAN MATRIX</b>  |  |                           |
|---|--|---------------------------|
| Action Number<br>Action Taken<br>Y/N  | Action Item Description                                | Status<br>(X, O, C, R, N) |
| #C - 5.14   | Evaluate/upgrade existing stormwater management system |                           |
| Status Description:   |  | O                         |
| <p><b>Completion status legend:</b><br/>                     N = New    O = Action Ongoing toward Completion<br/>                     C = Project Completed    R = Want Removed from Annex    X = No Action Taken</p> |  |                           |

**Action C - 5.15**

| <b>TABLE: ACTION PLAN MATRIX</b>  |   |                           |
|---|---|---------------------------|
| Action Number<br>Action Taken<br>Y/N  | Action Item Description   | Status<br>(X, O, C, R, N) |
| #C - 5.15   | Evaluate/upgrade transportation infrastructure for appropriate emergency access and evacuation capabilities |                           |
| Status Description:   |   | O                         |
| <p><b>Completion status legend:</b><br/>                     N = New    O = Action Ongoing toward Completion<br/>                     C = Project Completed    R = Want Removed from Annex    X = No Action Taken</p> |   |                           |

**Action C - 5.16**

| <b>TABLE: ACTION PLAN MATRIX</b>  |   |                           |
|---|---|---------------------------|
| Action Number<br>Action Taken Y/N   | Action Item Description   | Status<br>(X, O, C, R, N) |
| #C - 5.16   | Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses |                           |
| Status Description:   |   | O                         |
| <p align="center"><b>Completion status legend:</b><br/> <b>N</b> = New    <b>O</b> = Action Ongoing toward Completion<br/> <b>C</b> = Project Completed    <b>R</b> = Want Removed from Annex    <b>X</b> = No Action Taken</p> |   |                           |

**Action C - 5.17**

| <b>TABLE: ACTION PLAN MATRIX</b>  |   |                           |
|---|---|---------------------------|
| Action Number<br>Action Taken Y/N   | Action Item Description   | Status<br>(X, O, C, R, N) |
| #C - 5.17   | Continue to support the countywide actions identified in this plan. |                           |
| Status Description:<br>Yes  |   | O                         |
| <p align="center"><b>Completion status legend:</b><br/> <b>N</b> = New    <b>O</b> = Action Ongoing toward Completion<br/> <b>C</b> = Project Completed    <b>R</b> = Want Removed from Annex    <b>X</b> = No Action Taken</p> |   |                           |



**Action C - 5.18**

| <b>TABLE: ACTION PLAN MATRIX</b>  |  |                           |
|---|--|---------------------------|
| Action Number<br>Action Taken<br>Y/N  | Action Item Description  | Status<br>(X, O, C, R, N) |
| #C - 5.18   | Actively participate in the plan maintenance strategy identified in this plan. |                           |
| Status Description:<br>Yes  |  | O                         |
| <p align="center"><b>Completion status legend:</b><br/> <b>N</b> = New    <b>O</b> = Action Ongoing toward Completion<br/> <b>C</b> = Project Completed    <b>R</b> = Want Removed from Annex    <b>X</b> = No Action Taken</p> |  |                           |

**Action C - 5.20**

| <b>TABLE: ACTION PLAN MATRIX</b>  |   |                           |
|---|---|---------------------------|
| Action Number<br>Action Taken<br>Y/N  | Action Item Description   | Status<br>(X, O, C, R, N) |
| #C - 5.20   | Where feasible, implement a program to record high water marks following high-water events. |                           |
| Status Description:<br>No   |   | X                         |
| <p align="center"><b>Completion status legend:</b><br/> <b>N</b> = New    <b>O</b> = Action Ongoing toward Completion<br/> <b>C</b> = Project Completed    <b>R</b> = Want Removed from Annex    <b>X</b> = No Action Taken</p> |   |                           |

**Action C - 5.21**

| <b>TABLE: ACTION PLAN MATRIX</b>   |  |                           |
|--|--|---------------------------|
| Action Number<br>Action Taken Y/N  | Action Item Description  | Status<br>(X, O, C, R, N) |
| #C - 5.21  | Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment |                           |
| Status Description:  |  | O                         |
| <b>Completion status legend:</b><br><b>N</b> = New <b>O</b> = Action Ongoing toward Completion<br><b>C</b> = Project Completed <b>R</b> = Want Removed from Annex <b>X</b> = No Action Taken |  |                           |

### Completed Mitigation Actions

The following section represents completed mitigation actions, and serves as an archive of identified and completed projects.

**Action C - 5.3**

| <b>TABLE: ACTION PLAN MATRIX</b>  |   |                           |
|---|---|---------------------------|
| Action Number<br>Action Taken<br>Y/N  | Action Item Description   | Status<br>(X, O, C, R, N) |
| #C - 5.3  | Maintain compliance and good standing under National Flood Insurance Program. |                           |
| Status Description:<br>Yes  |   | C                         |
| <p align="center"><b>Completion status legend:</b><br/> <b>N</b> = New    <b>O</b> = Action Ongoing toward Completion<br/> <b>C</b> = Project Completed    <b>R</b> = Want Removed from Annex    <b>X</b> = No Action Taken</p> |   |                           |

**Action C - 5.19**

| <b>TABLE: ACTION PLAN MATRIX</b>  |  |                           |
|---|--|---------------------------|
| Action Number<br>Action Taken<br>Y/N  | Action Item Description  | Status<br>(X, O, C, R, N) |
| #C - 5.19   | Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady. |                           |
| Status Description:<br>Yes  | The 1st official Cook County certified Village received its recertification in 2018.                               | C                         |
| <p align="center"><b>Completion status legend:</b><br/> <b>N</b> = New    <b>O</b> = Action Ongoing toward Completion<br/> <b>C</b> = Project Completed    <b>R</b> = Want Removed from Annex    <b>X</b> = No Action Taken</p> |  |                           |

## Future Needs to Better Understand Risk/Vulnerability

No needs have been identified at this time.

## Additional Comments

No additional comments at this time

## HAZUS-MH Risk Assessment Results

| CHICAGO RIDGE EXISTING CONDITIONS               |                 |
|---|-----------------|
| 2010 Population                                 | 14,305          |
| Total Assessed Value of Structures and Contents | \$3,167,059,254 |
| Area in 100-Year Floodplain                     | 104.67 acres    |
| Area in 500-Year Floodplain                     | 124.97 acres    |
| Number of Critical Facilities                   | -               |

| HAZARD EXPOSURE IN CHICAGO RIDGE |                |           |                         |              |              |                                   |
|----------------------------------|----------------|-----------|-------------------------|--------------|--------------|-----------------------------------|
|                                  | Number Exposed |           | Value Exposed to Hazard |              | Total        | % of Total Assessed Value Exposed |
|                                  | Population     | Buildings | Structure               | Contents     |              |                                   |
| <b>Dam Failure</b>               |                |           |                         |              |              |                                   |
| Buffalo Creek                    | 0              | 0         | \$0                     | \$0          | \$0          | 0.00%                             |
| U. Salt Cr. #2                   | 0              | 0         | \$0                     | \$0          | \$0          | 0.00%                             |
| Touhy                            | 0              | 0         | \$0                     | \$0          | \$0          | 0.00%                             |
| U. Salt Cr. #3                   | 0              | 0         | \$0                     | \$0          | \$0          | 0.00%                             |
| U. Salt Cr. #4                   | 0              | 0         | \$0                     | \$0          | \$0          | 0.00%                             |
| <b>Flood</b>                     |                |           |                         |              |              |                                   |
| 100-Year                         | 176            | 54        | \$49,425,225            | \$47,825,126 | \$97,250,351 | 3.07%                             |

|                |     |    |               |               |                      |        |
|----------------|-----|----|---------------|---------------|----------------------|--------|
| 500-Year       | 237 | 73 | \$63,497,105  | \$54,861,065  | <b>\$118,358,170</b> | 3.74%  |
| <b>Tornado</b> |     |    |               |               |                      |        |
| 100-Year       | —   | —  | \$271,492,733 | \$286,505,857 | <b>\$557,998,589</b> | 17.62% |
| 500-Year       | —   | —  | \$575,206,778 | \$396,051,798 | <b>\$971,258,576</b> | 30.67% |

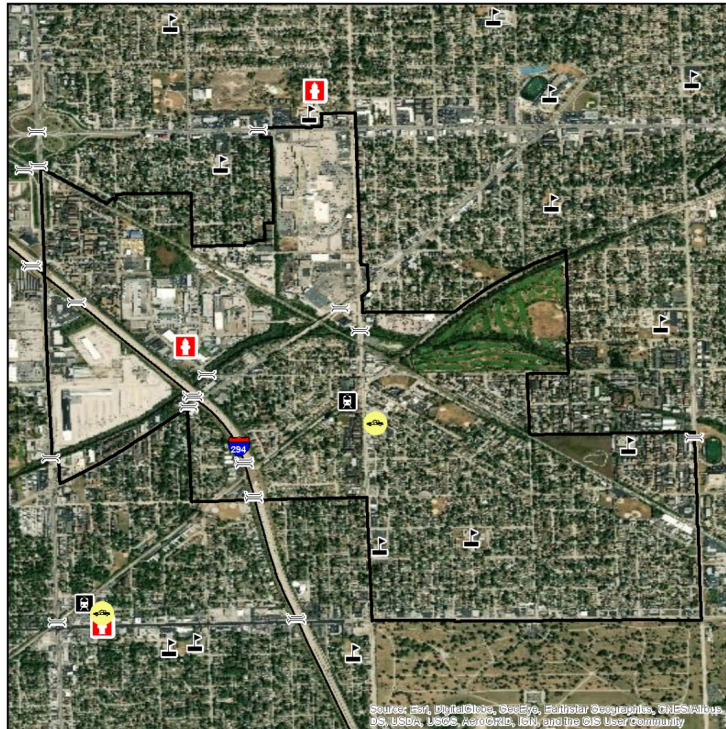
**ESTIMATED PROPERTY DAMAGE VALUES IN CHICAGO RIDGE**

|                       | Estimated Damage Associated with Hazard |              |                     | % of Total Assessed Value Damaged |
|-----------------------|---|--------------|---------------------|-----------------------------------|
|                       | Building                                | Contents     | Total               |                                   |
| <b>Dam Failure</b>    |   |              |                     |                                   |
| Buffalo Creek         | \$0                                     | \$0          | <b>\$0</b>          | 0.00%                             |
| U. Salt Cr. #2        | \$0                                     | \$0          | <b>\$0</b>          | 0.00%                             |
| Touhy                 | \$0                                     | \$0          | <b>\$0</b>          | 0.00%                             |
| U. Salt Cr. #3        | \$0                                     | \$0          | <b>\$0</b>          | 0.00%                             |
| U. Salt Cr. #4        | \$0                                     | \$0          | <b>\$0</b>          | 0.00%                             |
| <b>Earthquake</b>     |   |              |                     |                                   |
| 1909 Historical Event | \$45,227,096                            | \$15,341,631 | <b>\$60,568,727</b> | 1.91%                             |
| <b>Flood</b>          |   |              |                     |                                   |
| 10-Year               | \$14,996                                | \$0          | <b>\$14,996</b>     | 0.00%                             |
| 100-Year              | \$1,050,556                             | \$911,299    | <b>\$1,961,855</b>  | 0.06%                             |
| 500-Year              | \$6,261,268                             | \$6,114,357  | <b>\$12,375,625</b> | 0.39%                             |



| <b>Tornado</b> |              |              |                      |       |
|----------------|--------------|--------------|----------------------|-------|
| 100-Year       | \$27,149,273 | \$28,650,586 | <b>\$55,799,859</b>  | 1.76% |
| 500-Year       | \$83,980,190 | \$57,823,562 | <b>\$141,803,752</b> | 4.48% |

# Hazard Mapping



## VILLAGE OF CHICAGO RIDGE

### CRITICAL INFRASTRUCTURE

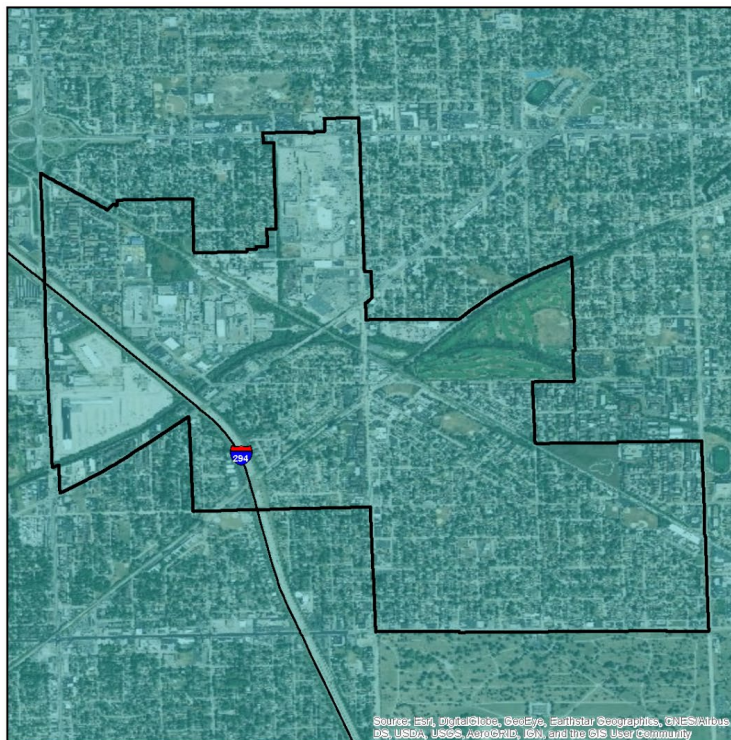
- Oil Facilities
- Transit Centers
- Military Facilities
- Police Stations
- Fire Stations
- Hazardous Waste
- Airports
- Hospitals
- Highway Bridges
- Warming Centers
- Cooling Centers
- Schools
- Railroad Stations

Base Map Data Sources:  
Cook County, ESRI



0 0.1 0.2 0.4 0.6 0.8 Miles

Source: ESRI, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



## VILLAGE OF CHICAGO RIDGE

### PEAK GROUND ACCELERATION FOR A 100 YEAR EARTHQUAKE EVENT

Mercalli Scale, Potential Shaking  
II-III Weak

Data provided by the USGS Earthquake Hazards Program and Cook County.

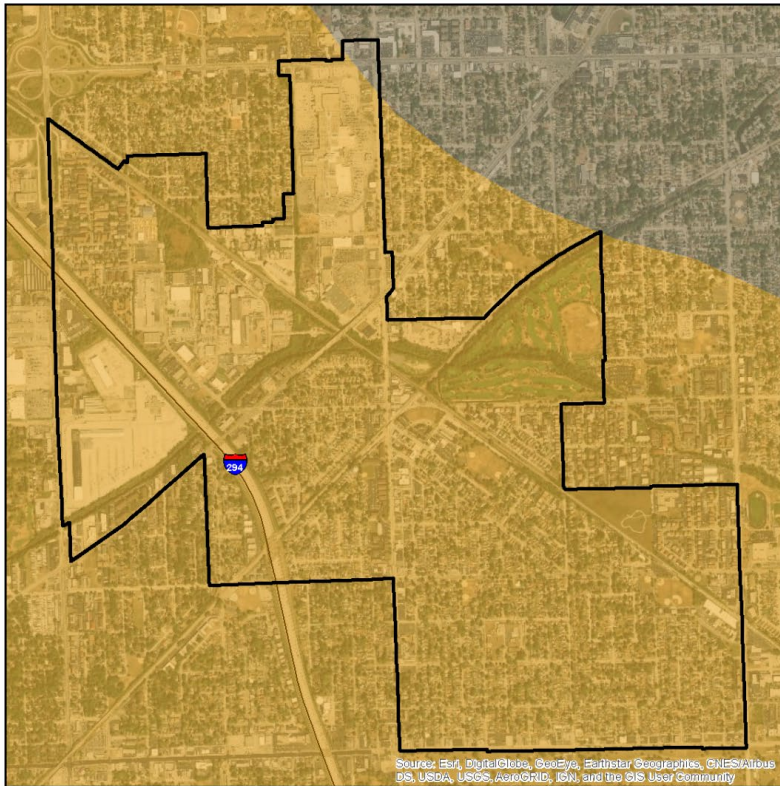
Probabilistic seismic-hazard maps were prepared for the conterminous United States for 2014 portraying peak horizontal acceleration and horizontal spectral response acceleration for 0.2 and 1.0-second periods with probabilities of exceedance of 10 percent in 50 years and 2 percent in 50 years. All of the maps were prepared by combining the hazard derived from spatially smoothed historical seismicity with the hazard from fault-specific sources. The acceleration values contoured are the random horizontal component. The reference site condition is firm rock, defined as having an average shear-wave velocity of 760 m/s in the top 30 meters corresponding to the boundary between NEHRP (National Earthquake Hazards Reduction Program) site classes B and C.

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0 0.1 0.2 0.4 0.6 0.8 Miles

Source: ESRI, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



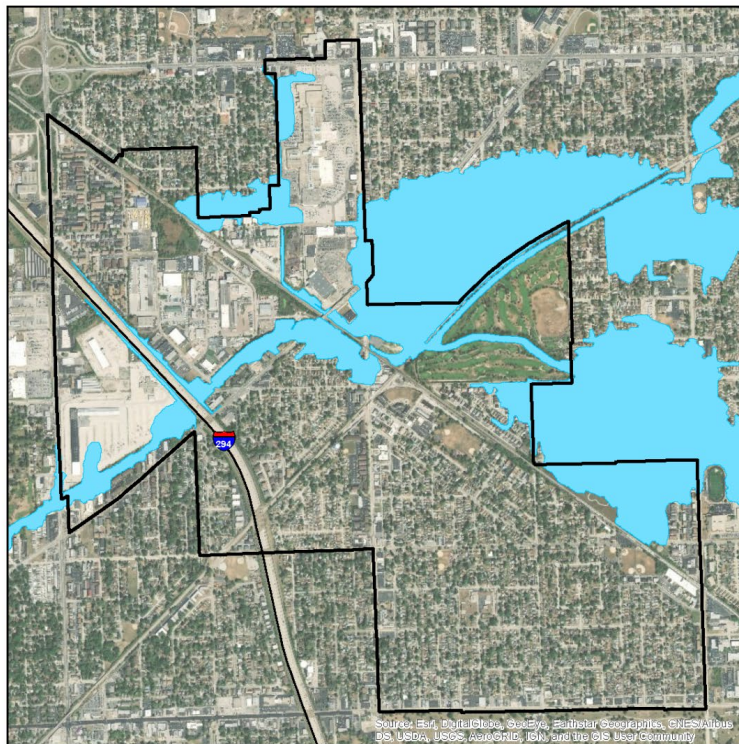
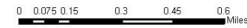
**VILLAGE OF CHICAGO RIDGE**  
**NATIONAL EARTHQUAKE HAZARD REDUCTION PROGRAM (NEHRP) SOIL CLASSIFICATION**

- TYPE**
- C - Very Dense Soil, Soft Rock
  - D - Stiff Soil
  - F - Site Specific Evaluation

Data provided by the Illinois State Geological Survey and Cook County.

The Central United States Earthquake Consortium (CUSEC) State Geologists produced a regional Soil Site Class map (NEHRP Soil Profile Type Map), a Liquefaction Susceptibility Map and a Soil Response Map for the 8 states to be used in the FEMA New Madrid Catastrophic Planning Initiative Phase II work. The USGS Geologic Investigation Series I-2789 Map of Surficial Deposits and Materials in the Eastern and Central United States (East of 102 degrees West Longitude) by David S. Fullerton, Charles A. Bush and Jean N. Pennell (2003) was the base map used for this work. Each State Geological Survey produced its own state map version of the Soil Site Class and Liquefaction Susceptibility maps. The procedures outlined in the NEHRP provisions (Building Seismic Safety Council, 2004) and the 2003 International Building Codes (International Code Council, 2002) were followed to produce the soil site class maps. CUSEC State Geologists used the entire column of soils material down to bedrock and did not include any bedrock in the calculation of the average shear wave velocity for the column, since it is the soil column and the difference in shear wave velocity of the soils in comparison to the bedrock which influences much of the amplification.

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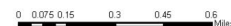
**VILLAGE OF CHICAGO RIDGE**  
**COOK COUNTY MWRDGC 100-YEAR INUNDATION AREA**

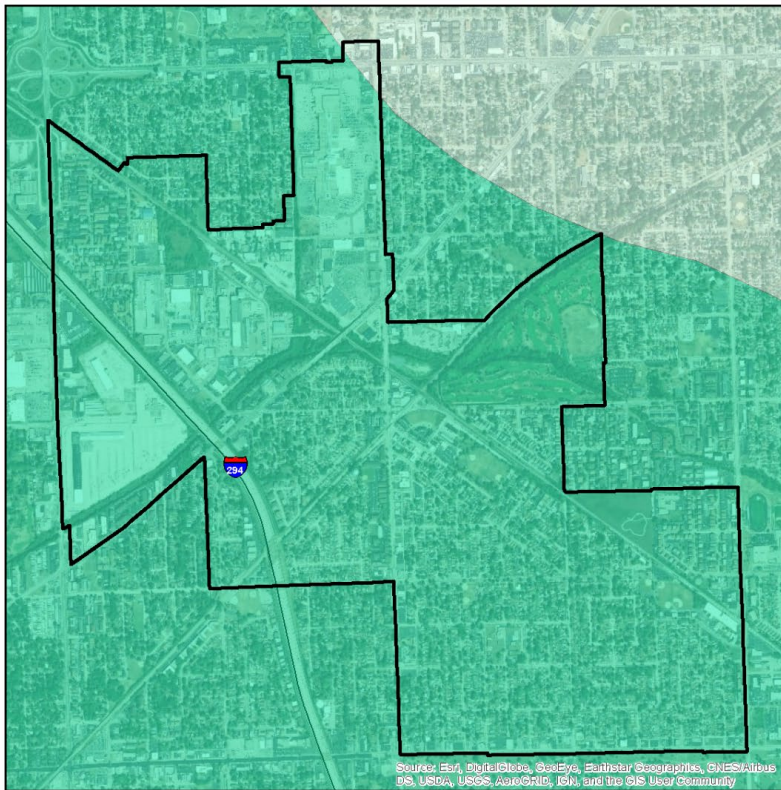
- 100-year Inundation Area

MWRDGC Data provided by Metropolitan Water Reclamation District of Greater Chicago and Cook County.

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**DISCLAIMER:** The Cook County MWRDGC 100-year Inundation Map is provided to show general flood risk information regarding floodplains and inundation areas. This map is not regulatory. Official FEMA Flood Insurance Study information and regulatory maps can be obtained from <http://www.fema.gov>.





VILLAGE OF CHICAGO RIDGE

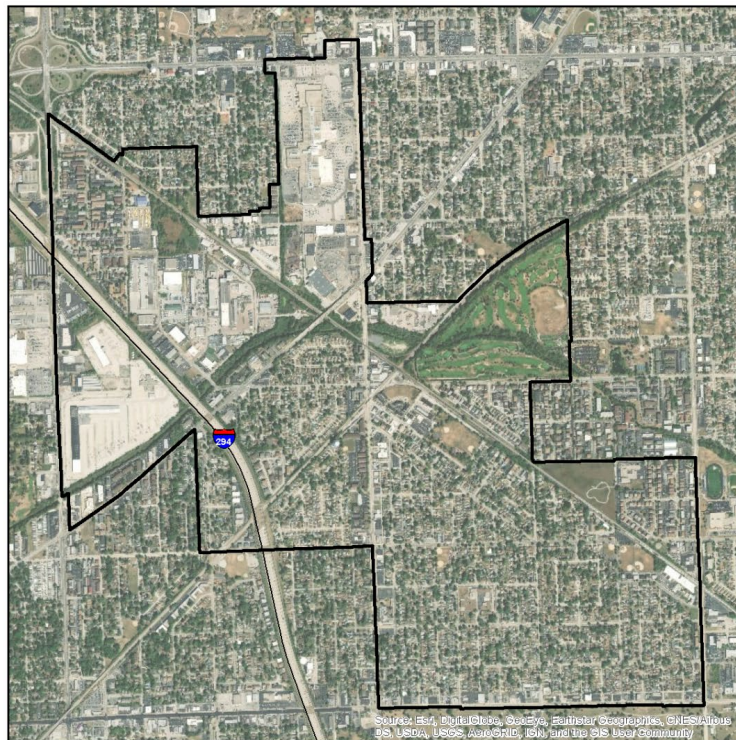
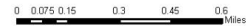
LIQUEFACTION SUSCEPTIBILITY

- LIQUEFACTION SUSCEPTIBILITY**
- high
  - low
  - very low

Data provided by the Illinois State Geological Survey and Cook County.

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VILLAGE OF CHICAGO RIDGE

100- AND 500- YEAR TORNADO EVENTS

- Magnitude**
- 4 (100 year event)
  - 5 (500 year event)

Historic tornado data provided by NOAA/NWS showing the initial points and paths of all F4 and F5 events observed from 1950 to 2017.

